

Cape Wind Energy Project

**Draft Environmental
Impact Statement**

USACE NAE-2004-338-1
(Formerly #200102913)

**Draft Environmental
Impact Report**

EOEA #12643

**Development of
Regional Impact**

CCC #JR#20084

November 2004



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Website Version





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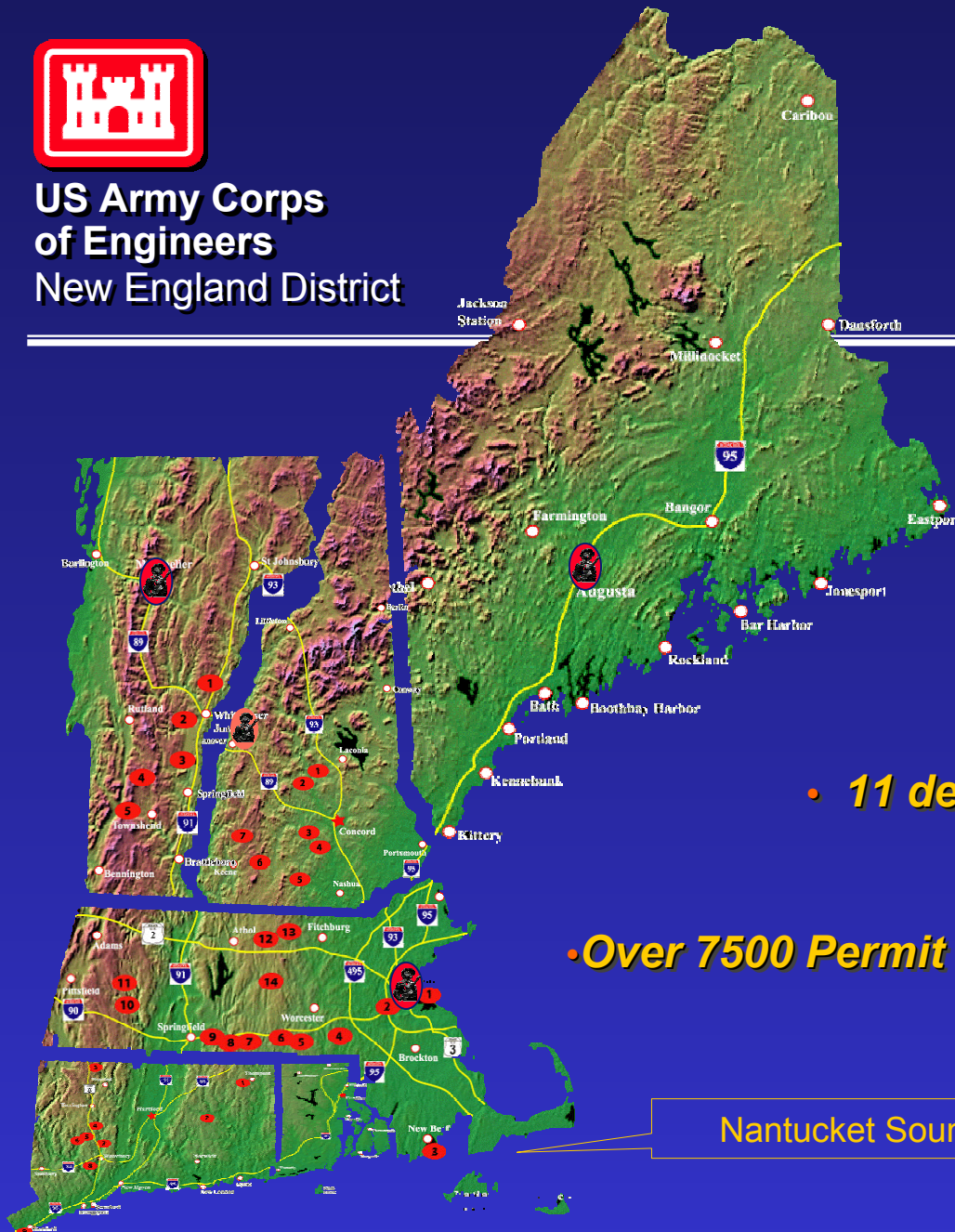
Project Description

- **454 MW capacity offshore wind power project**
- **Location at Horseshoe Shoals in Nantucket Sound**
- **130 turbines, 100x200ft electric service platform**
- **420 feet above MLLW**
- **Spread over 24 sq. mi. (1/3-1/2 mi spacing)**
- **16-foot diameter piles w/scour mats will occupy 2 acres**
- **Providing power to ISO-NE grid, two 115kv AC transmission lines coming ashore in Yarmouth**



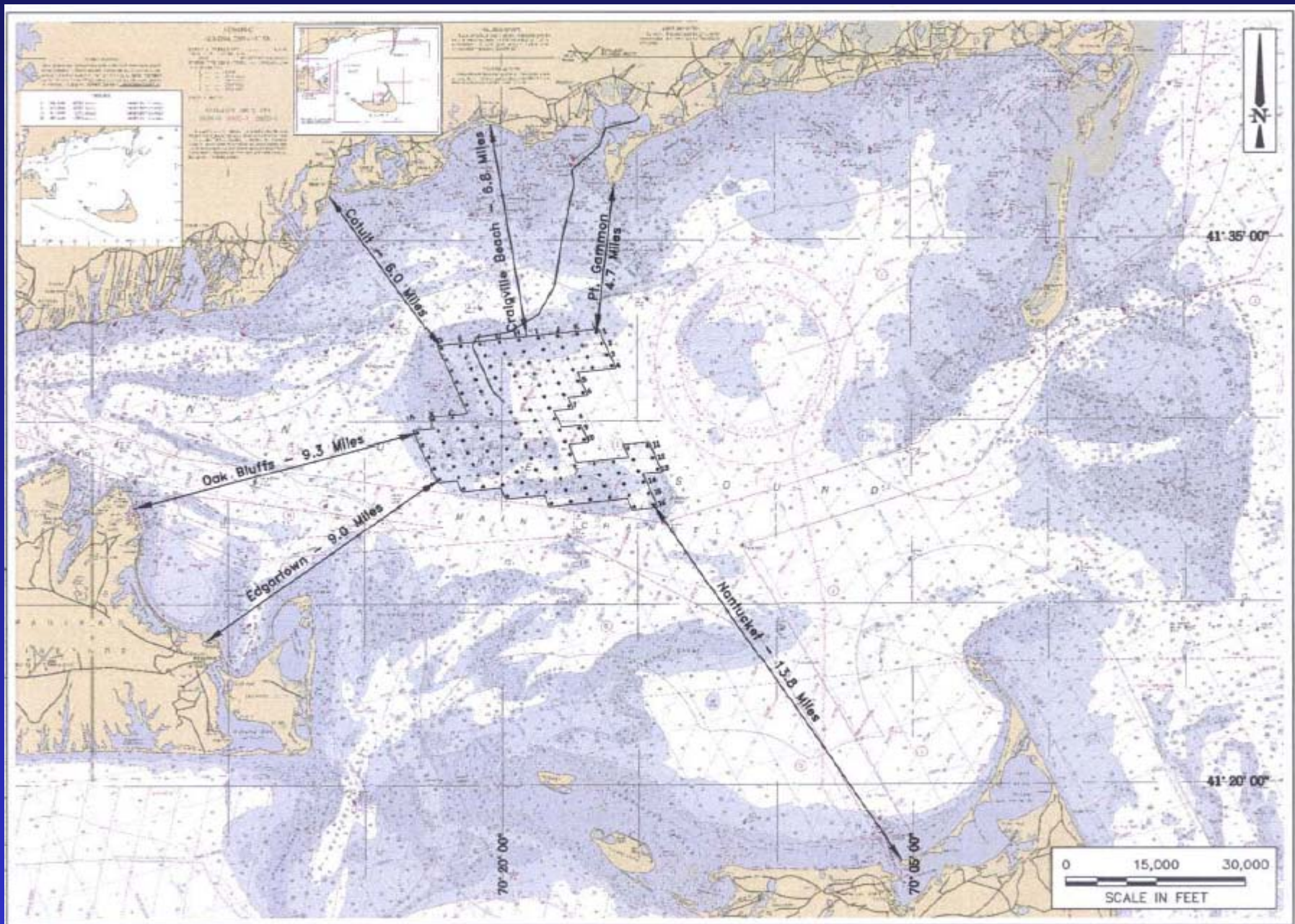
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New England District at a Glance



- **Six Governors**
- **12 Senators**
- **22 Congressional Districts**
 - **13 million people**
 - **66,000 square miles**
 - **6,100 miles of coastline**
- **11 deep draft commercial waterways**
- **13 major river basins**
- **171 Federal Harbors**
- **Over 7500 Permit Applications Received Annually**

Nantucket Sound





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Regulatory Authority

Section 10 of the Rivers & Harbors Act of 1899 -
structures or work in or affecting navigable waters of the United States

Navigable waters - “those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce.”

Implementing Regulations: 33 CFR Part 320-330



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National Environmental Policy Act

Environmental Impact Statement is required for major federal actions significantly affecting the human environment

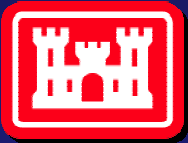
EIS documents the relevant effects & issues and reasonable alternatives of the proposed action.



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Environmental Impact Statement

- **Range of alternatives**
- **Birds, fish, marine mammals, benthos**
- **Endangered species-whales, turtles, birds**
- **Visual affect on historic districts**
- **Changes to ecosystem due to introduction of structures**
- **Property rights, public trust, environmental justice**
- **Aviation**
- **Socio-economic (recreation,tourism & fishing industries)**
- **Navigation**
- **Air Quality**



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Project Purpose

*Utility scale renewable energy facility
providing power to the New England grid*

What does “utility scale” mean?

Applicant proposes 454 MW facility

Recent power plant projects in ISO-NE grid are
200-1500 MW

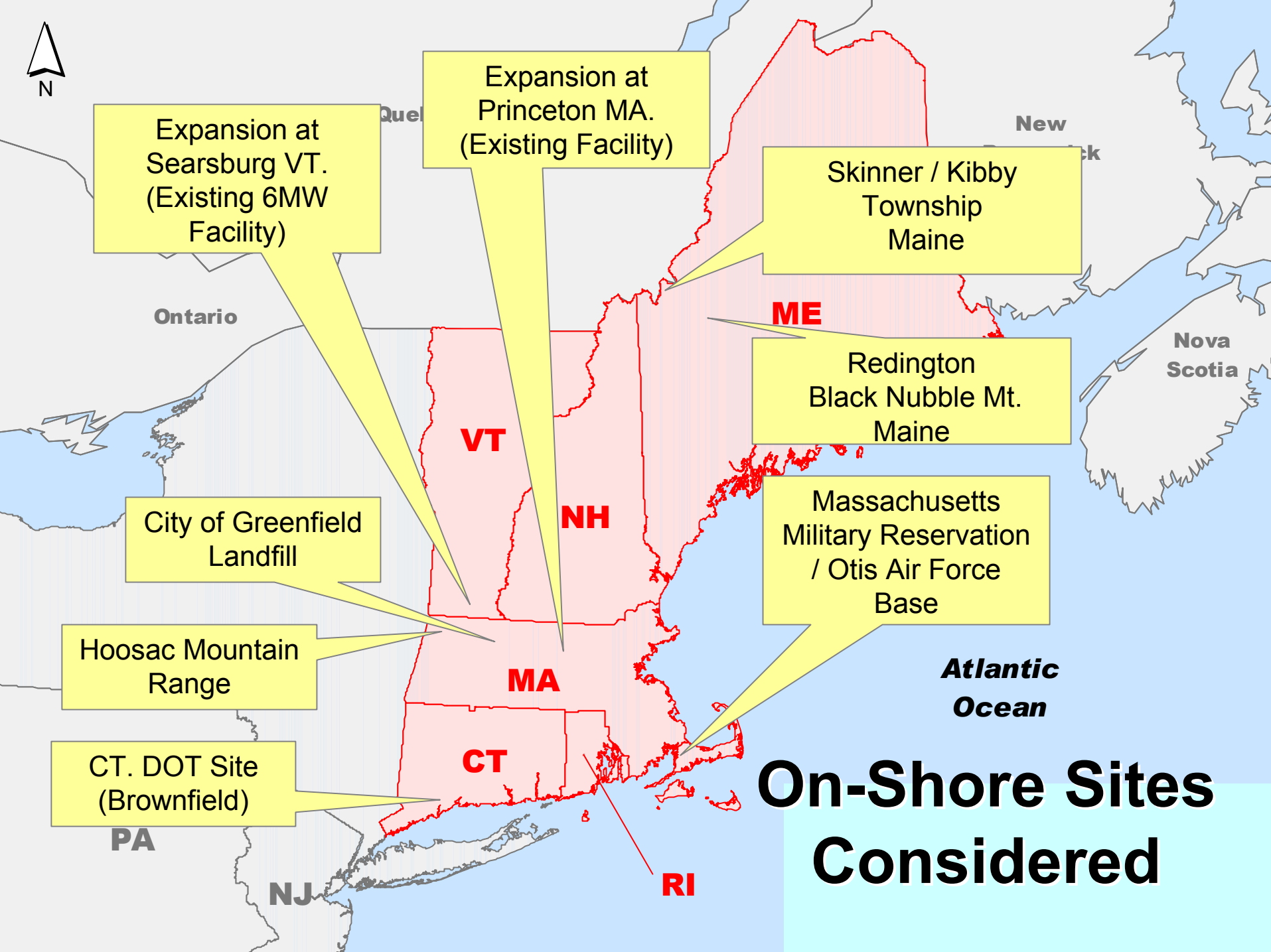
Reasonable range?

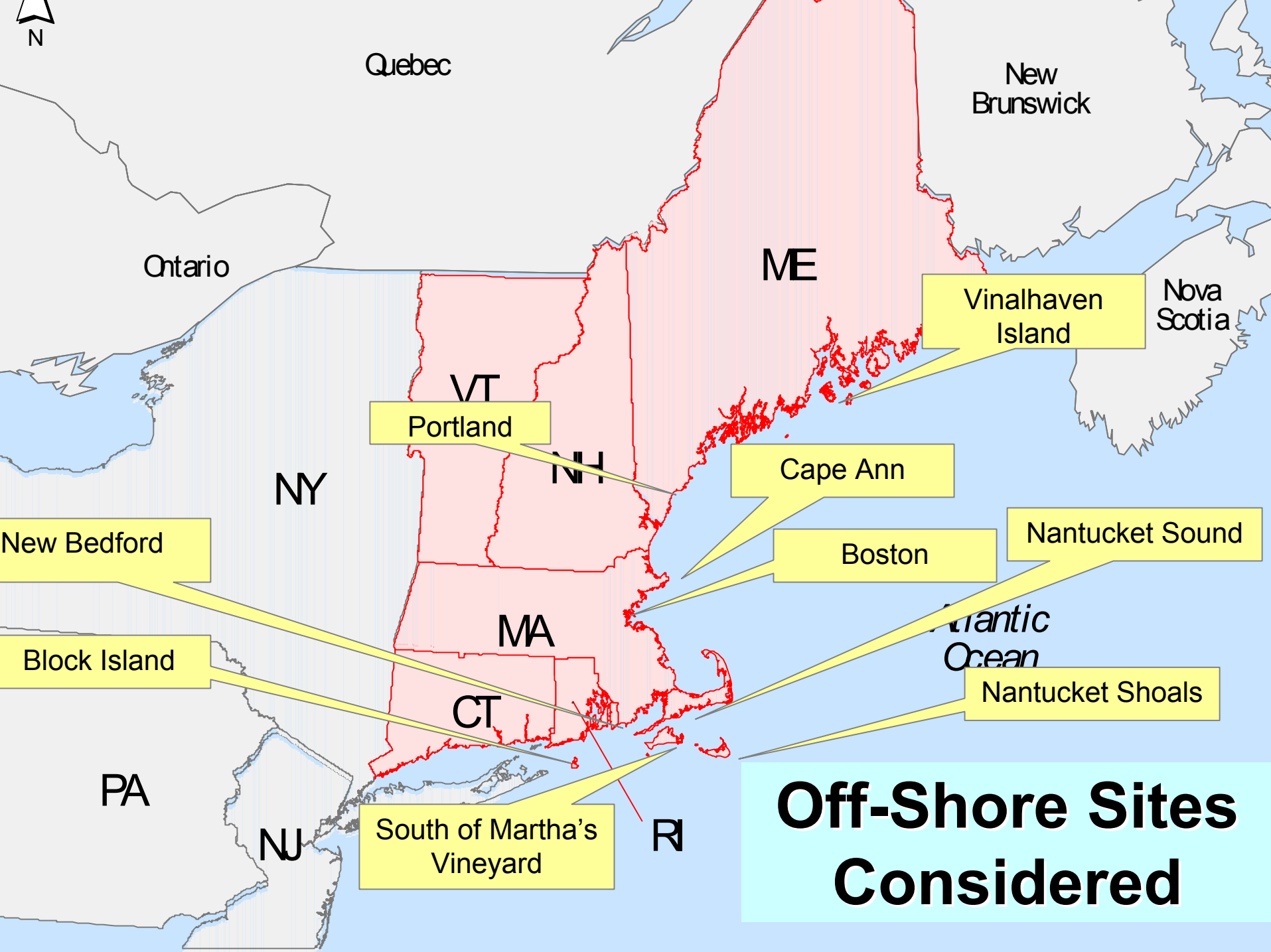


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Preliminary Screening Criteria

- **Sufficient surplus electric transmission capacity in the ISO-NE transmission system**
- **Wind Power Classification of 4 or greater (Wind speeds >15.7 mph at 50 meters)**
- **Available land or offshore water sheet area sufficient to accommodate a 200-1,500 MW wind energy project**
- **Engineering & design limitations**
 - **Water depths, storm waves**
- **Legal & regulatory constraints**
 - **State & federal park or conservation designation**





Quebec

New Brunswick

Ontario

ME

Vinalhaven Island

Nova Scotia

VT

Portland

NH

Cape Ann

NY

New Bedford

Boston

Nantucket Sound

MA

Atlantic Ocean

Block Island

Nantucket Shoals

CT

PA

NJ

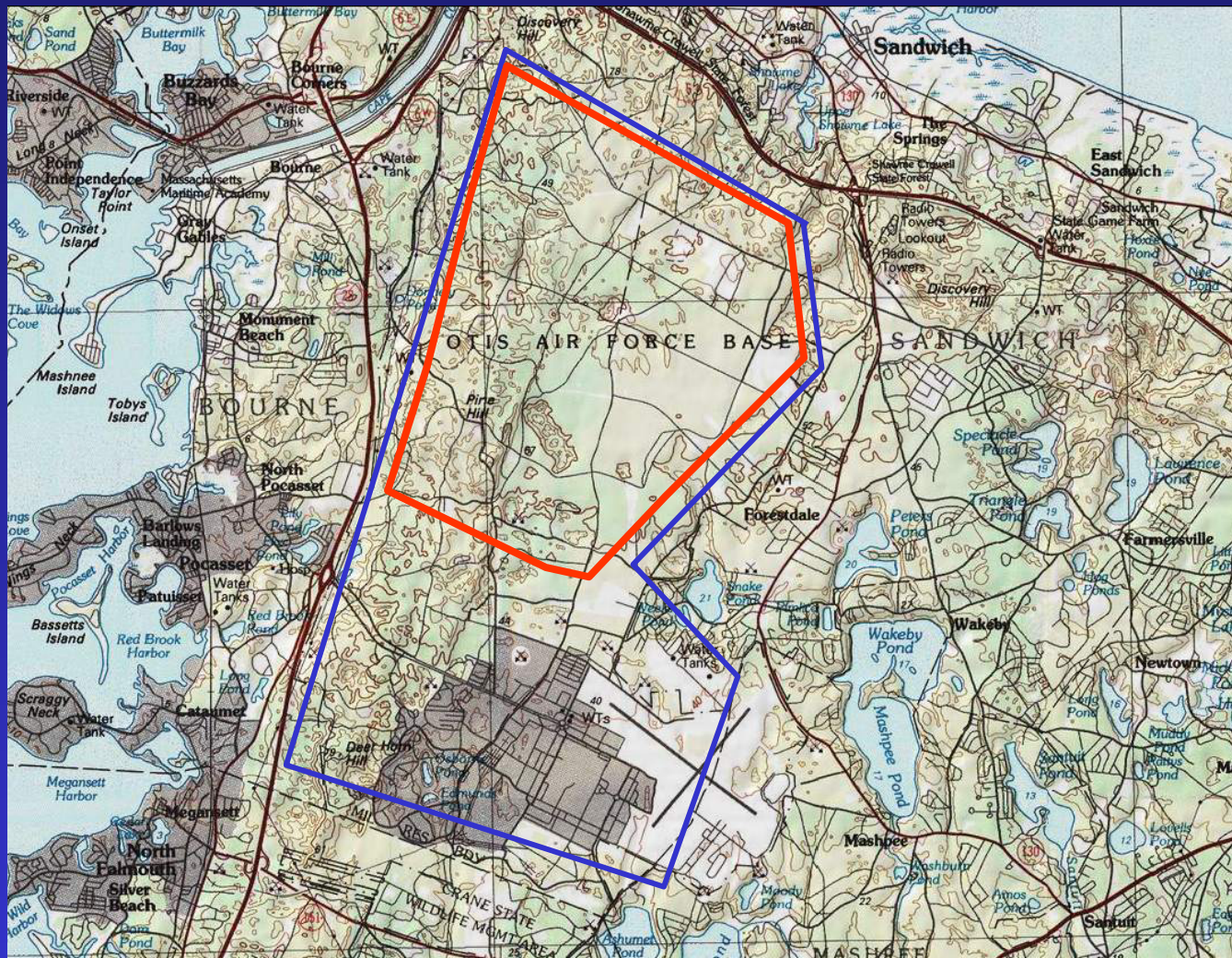
South of Martha's Vineyard

RI

Off-Shore Sites Considered

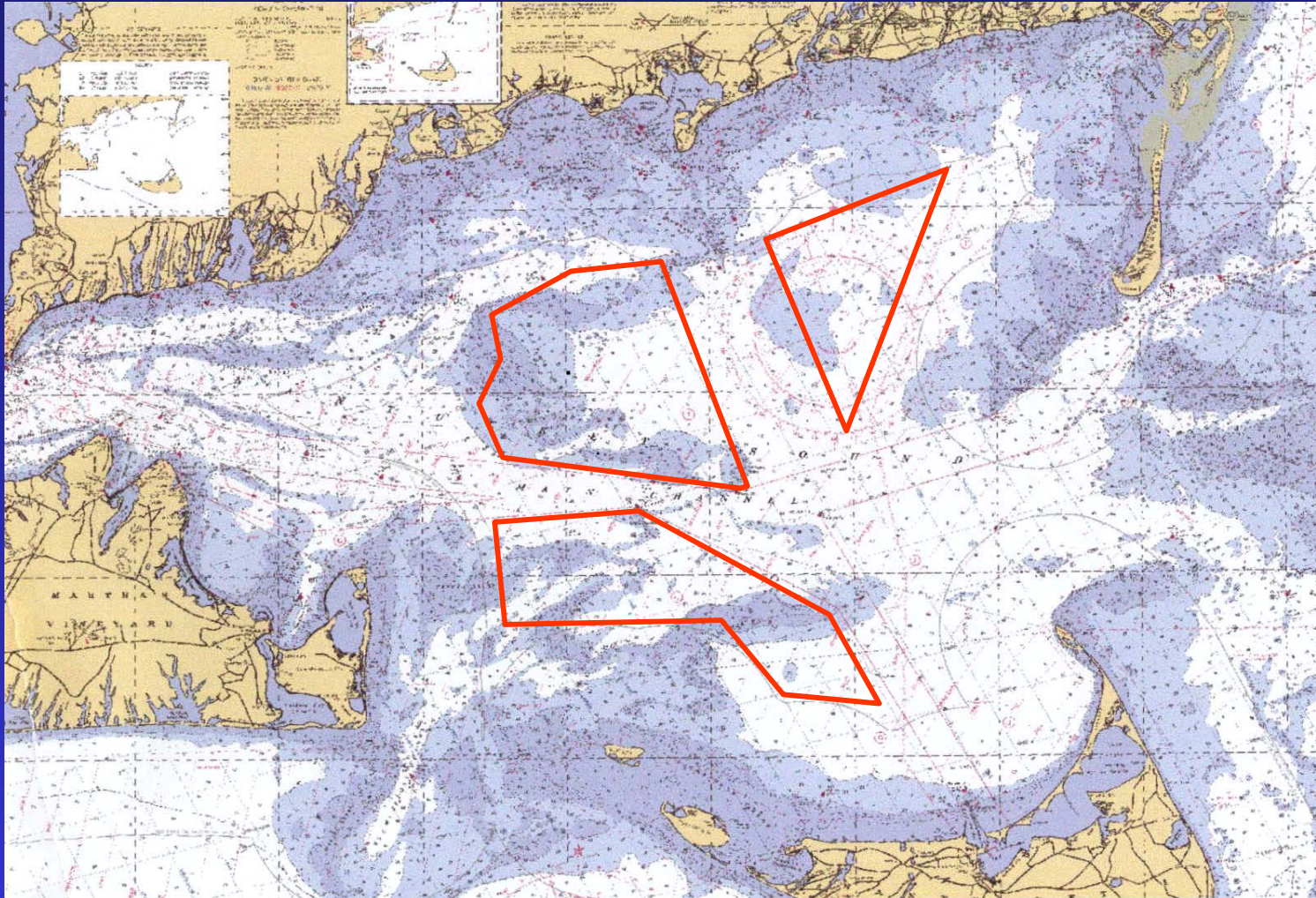
Onshore Alternative

Massachusetts Military Reservation, MA



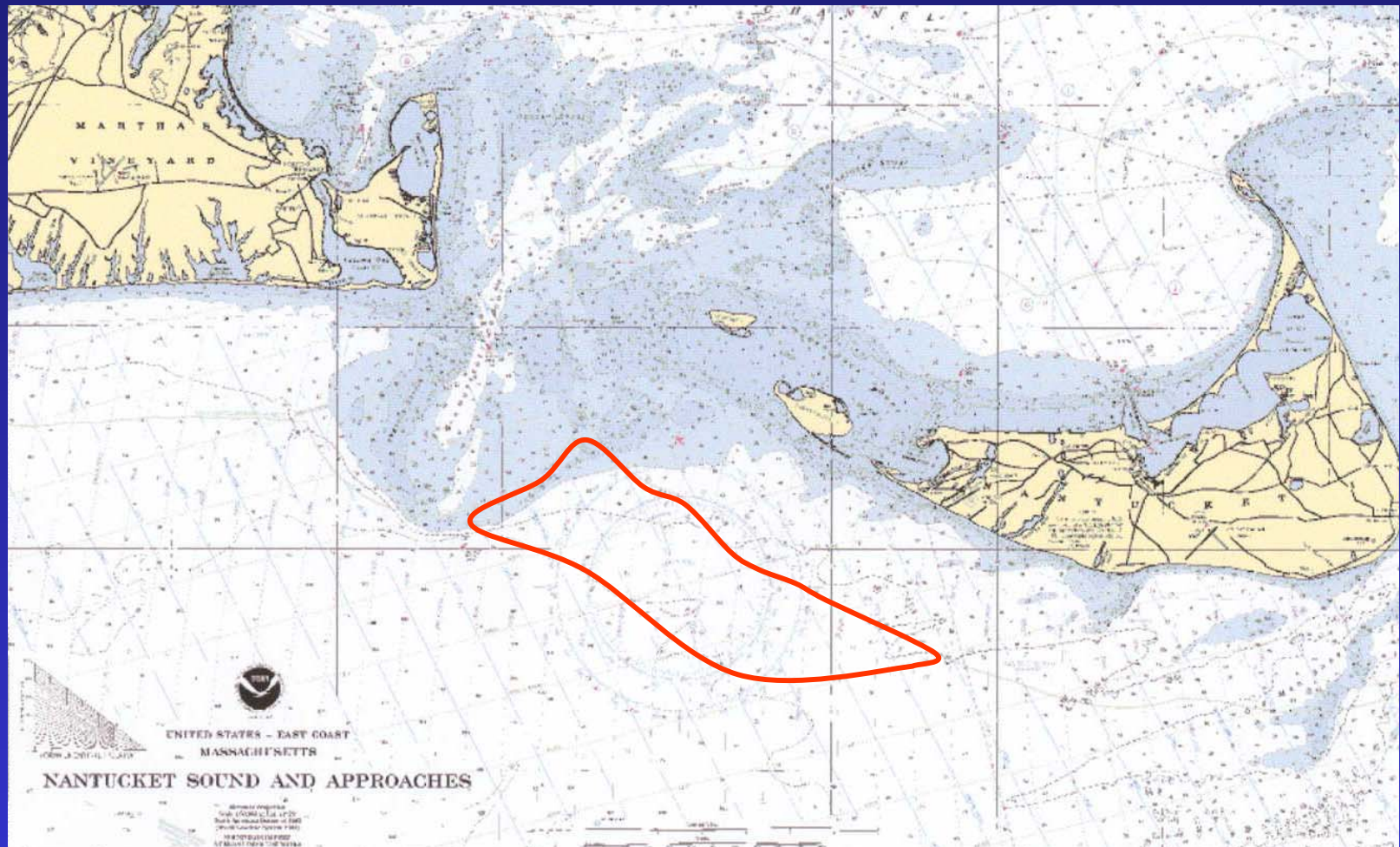
Shallow Water Alternative

Nantucket Sound, MA



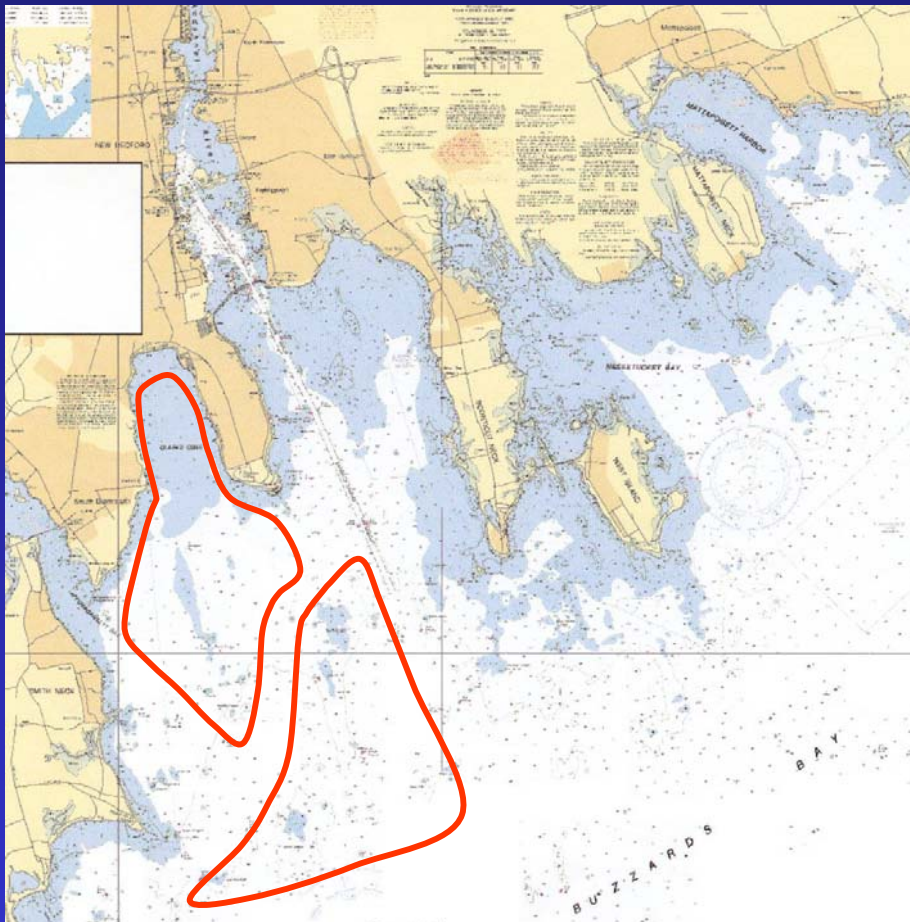
Deeper Water Alternative

South of Tuckernuck Island, MA

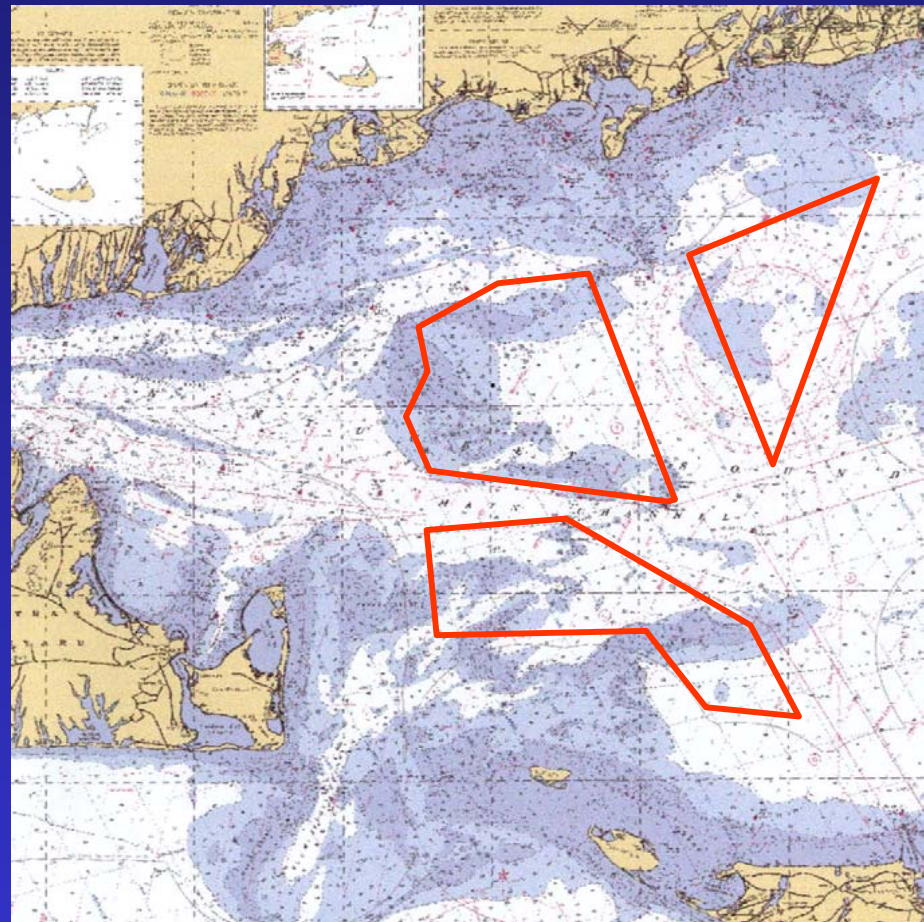


Combined Locations

New Bedford, MA



Nantucket Sound, MA



PROPOSED VIEW



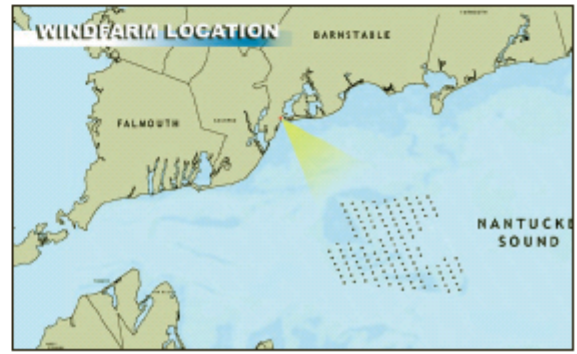
EXISTING VIEW



VIEWPOINT LOCATION



WINDFARM LOCATION



Simulated Nighttime View



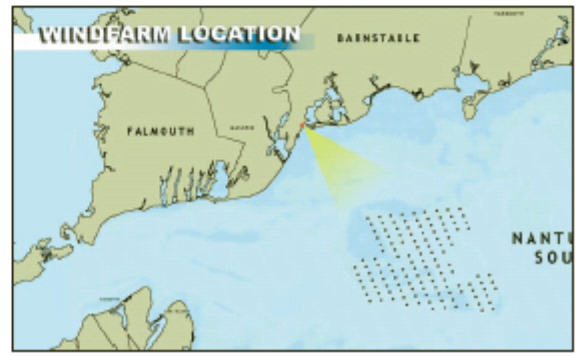
EXISTING VIEW



VIEWPOINT LOCATION



WINDFARM LOCATION





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Impacts & Benefits

Geology

Oceanography

Fish

Benthic & Shellfish

Protected Marine

Species

Birds

Water Quality

Historic & Cultural

Resources

Noise

Navigation (air & sea)

Air & Climate

Telecommunications

Socio-economic



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Unusual Policy/Legal Issues

- **Jurisdiction: Section 10 RHA**
- **State's offshore boundary: recent change seaward**
- **Public Trust: Property rights/Lack of policy on ocean use**
- **Programmatic EIS: Is Corps right agency?**



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Legal Challenge

August 19, 2002 - permit to install the Scientific Measurement Device Station (aka “Met. tower”)

Aug. 30, 2002 - sued in Federal Court (Civil Action No. 02-11749-JLT). Opponents contend the Corps lacks jurisdiction, the applicant has no property interests, the EA is deficient and public review of the draft EA is required.

September 18, 2003 – Federal Court concurred with the government on all points.

February 16, 2005 - The decision was upheld in appeal.



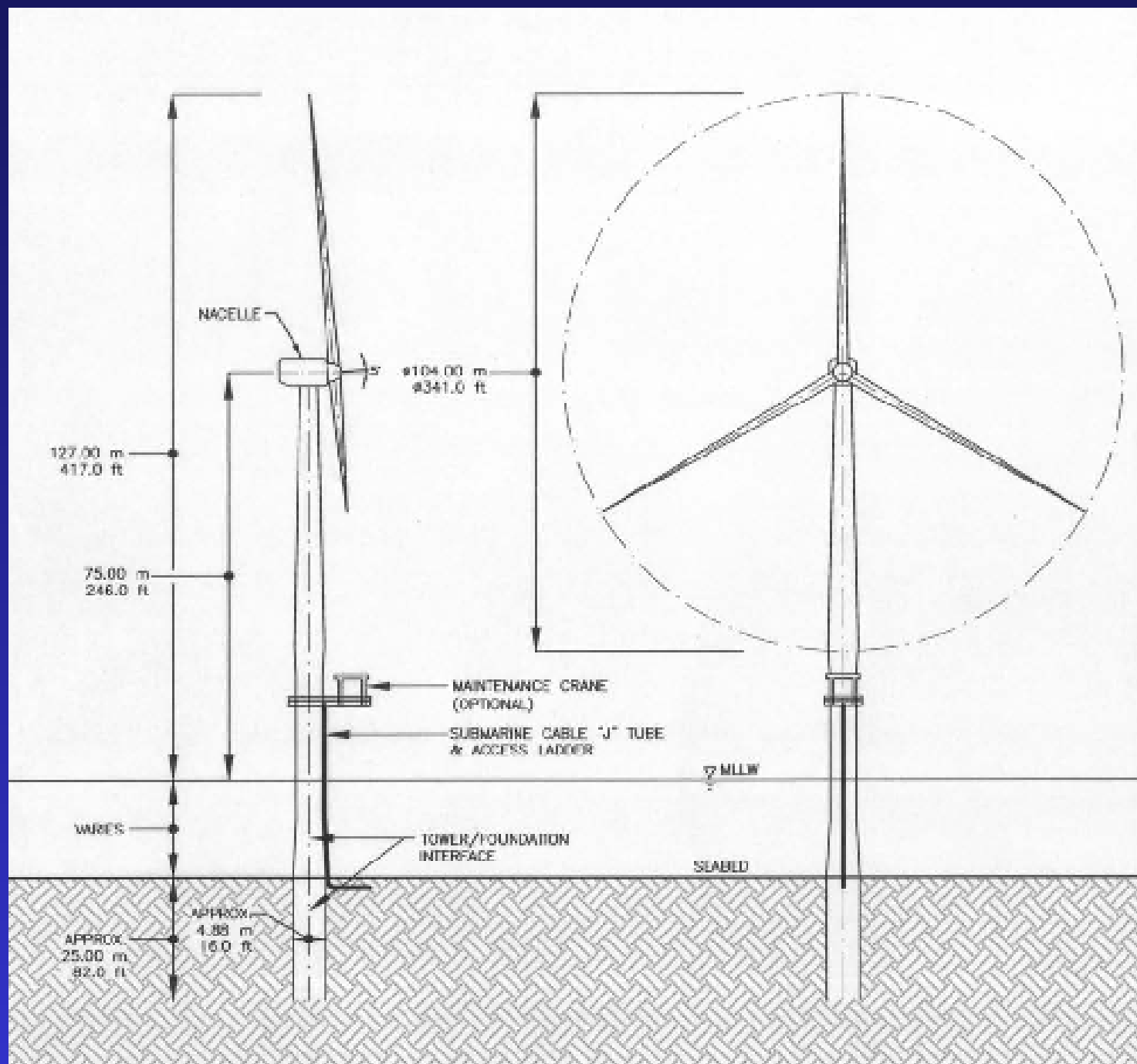


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Energy Policy Act of 2005

Sec 388. Alternate energy-related uses on the Outer Continental Shelf

- protect the economic and land use interests of the United States through the management and oversight of alternate energy-related projects on the OCS.
- establishes Mineral Management Service (DOI) management and oversight and provides for interagency coordination in the siting and permitting of alternate-energy activities.
- does not override any existing authority, but seeks to fill in a gap in the law with respect to alternate energy projects.

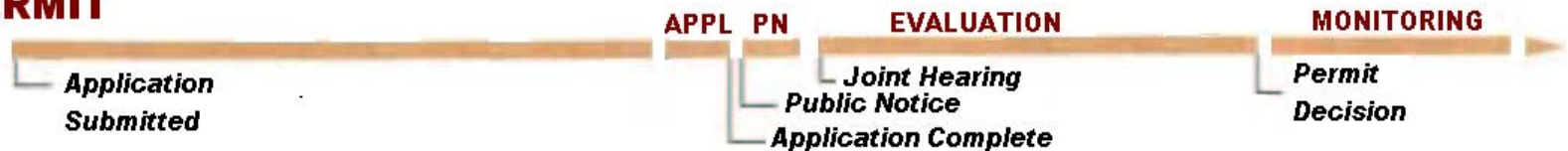




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Integrated Sequence of NEPA and the Corps of Engineers Regulatory Permitting Processes

CORPS PERMIT PROCESS



NEPA EIS PROCESS

